

PCT09

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/830,446

DATE: 10/29/2001

TIME: 11:24:00

Input Set : A:\seqed.app.txt

Output Set: N:\CRF3\10292001\I830446.raw

Does Not Comply

Corrected Diskette Needed

3 <110> APPLICANT: MURDIN, Andrew D.; OOMEN, Raymond P; and WANG, Joe  
 5 <120> TITLE OF INVENTION: Chlamydia antigens and corresponding DNA fragments and uses  
 thereof  
 7 <130> FILE REFERENCE: 77813-51  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/830,446  
 C--> 10 <141> CURRENT FILING DATE: 2001-09-21  
 12 <150> PRIOR APPLICATION NUMBER: US 60/106034  
 13 <151> PRIOR FILING DATE: 1998-10-28  
 14 <150> PRIOR APPLICATION NUMBER: US 60/106039  
 15 <151> PRIOR FILING DATE: 1998-10-28  
 16 <150> PRIOR APPLICATION NUMBER: US 60/10604  
 17 <151> PRIOR FILING DATE: 1998-10-28  
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 19 <151> PRIOR FILING DATE: 1998-10-28  
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 21 <151> PRIOR FILING DATE: 1998-10-29  
 22 <150> PRIOR APPLICATION NUMBER: US 60/106073  
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 25 <151> PRIOR FILING DATE: 1998-10-29  
 26 <150> PRIOR APPLICATION NUMBER: US 60/106087  
 27 <151> PRIOR FILING DATE: 1998-10-29  
 28 <150> PRIOR APPLICATION NUMBER: US 60/106587  
 29 <151> PRIOR FILING DATE: 1998-11-02  
 30 <150> PRIOR APPLICATION NUMBER: US 60/106588  
 31 <151> PRIOR FILING DATE: 1998-11-02  
 32 <150> PRIOR APPLICATION NUMBER: US 60/107089  
 33 <151> PRIOR FILING DATE: 1998-11-02  
 34 <150> PRIOR APPLICATION NUMBER: US 60/107034  
 35 <151> PRIOR FILING DATE: 1998-11-02  
 36 <150> PRIOR APPLICATION NUMBER: US 60/107035  
 37 <151> PRIOR FILING DATE: 1998-11-02  
 39 <160> NUMBER OF SEQ ID NOS: 45  
 41 <170> SOFTWARE: PatentIn Ver. 2.0

## ERRORED SEQUENCES

3349 <210> SEQ ID NO: 36  
 3350 <211> LENGTH: 588  
 3351 <212> TYPE: PRT  
 3352 <213> ORGANISM: Chlamydia pneumoniae  
 3354 <400> SEQUENCE: 36  
 3355 Ile Leu Gln Ile Glu Asp Leu Ser Ile Thr Leu  
 3356 1 5 10  
 3358 Ala Lys Gln Arg Gln Gln Tyr Pro Ile Val Gln Ser Leu Ser Phe Thr  
 3359 15 20 25  
 3361 Ile Asn Glu Gly Gln Thr Leu Ala Ile Ile Gly Glu Ser Gly Ser Gly

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3362          30          35          40
3364 Lys Ser Val Ser Ala His Ala Ile Leu Arg Leu Leu Pro Cys Pro Pro
3365          45          50          55
3367 Phe Ser Val Ser Gly Gln Val Asn Phe Gln Gly His Asn Leu Leu Thr
3368 60          65          70          75
3370 Ala Ser Arg Ser Ile Gln Lys Lys Ile Ile Gly Thr Glu Ile Ser Met
3371          80          85          90
3373 Ile Phe Gln Asn Pro Gln Ala Ser Leu Asn Pro Val Phe Thr Ile Glu
3374          95          100          105
3376 Gln Gln Phe Arg Glu Ile Ile His Thr His Leu Ala Leu Thr Ala Glu
3377          110          115          120
3379 Val Ala Lys Glu Lys Met Leu Tyr Ala Leu Glu Glu Thr Gly Phe His
3380          125          130          135
3382 Asp Pro Arg Leu Cys Leu Asn Leu Tyr Pro His Gln Leu Ser Gly Gly
3383 140          145          150          155
3385 Met Leu Gln Arg Ile Cys Ile Ala Met Ala Leu Leu Cys Ser Pro Lys
3386          160          165          170
3388 Leu Leu Ile Ala Asp Glu Pro Thr Thr Ala Leu Asp Val Ser Val Gln
3389          175          180          185
3391 Tyr Gln Ile Leu Gln Leu Leu Lys Thr Leu Gln Lys Lys Thr Gly Met
3392          190          195          200
3394 Ser Leu Leu Ile Ile Thr His Asn Met Gly Val Val Ala Glu Thr Ala
3395          205          210          215
3397 Asp Asp Val Leu Val Leu Tyr Ala Gly Arg Met Val Glu Cys Ala Pro
3398 220          225          230          235
3400 Ala Val Gln Met Phe His Asn Pro Ser His Pro Tyr Thr Arg Asp Leu
3401          240          245          250
3403 Leu Ala Ser Arg Pro Ser Leu Gln Pro Gln Gln Leu Gly Ser Phe Asn
3404          255          260          265
3406 Pro Ile Pro Gly Gln Pro Pro His Tyr Thr Ala Phe Pro Ser Gly Cys
3407          270          275          280
3409 Arg Tyr His Pro Arg Cys Ser Lys Ile Leu Asn Arg Cys Ser Ala Glu
3410          285          290          295
3412 Ala Pro Glu Ile Tyr Pro Val Arg Glu Gly His Lys Val Arg Val Gly
3413 300          305          310          315
3415 Cys Met Thr Thr Asn Phe Pro Gln Pro Leu Ile Gln Ala Thr Ser Leu
3416          320          325          330
3418 Thr Lys His Tyr Tyr Lys Arg Ser Phe Trp Phe Gln Gly Lys Thr Ile
3419          335          340          345
3421 Ala Ser Arg Pro Val Asp Asp Val Ser Phe Ser Leu Tyr Ser Arg Arg
3422          350          355          360
3424 Ala Val Gly Leu Ile Gly Glu Ser Gly Ser Gly Lys Ser Thr Leu Ala
3425          365          370          375
3427 Leu Ala Leu Ala Gly Leu Leu Pro Leu Thr Ser Gly Phe Leu Thr Phe
3428 380          385          390          395
3430 Asn Gly Thr Pro Ile Lys Leu His Ser Lys His Gly Arg His Gln Leu
3431          400          405          410
3433 Arg Ser Gln Val Arg Leu Val Phe Gln Asn Pro Gln Ala Ser Leu Asn
3434          415          420          425

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3436 Pro Arg Lys Thr Ile Leu Asp Ser Leu Gly His Ser Leu Leu Tyr His
3437          430          435          440
3439 Lys Leu Val Pro Lys Glu Lys Val Leu Ala Thr Val Arg Glu Tyr Leu
3440          445          450          455
3442 Glu Leu Val Gly Leu Ser Glu Glu Tyr Phe Tyr Arg Tyr Pro His Gln
3443 460          465          470          475
3445 Leu Ser Gly Gly Gln Gln Gln Arg Val Ser Ile Ala Arg Ala Leu Leu
3446          480          485          490
3448 Gly Val Pro Gln Leu Ile Ile Cys Asp Glu Ile Val Ser Ala Leu Asp
3449          495          500          505
3451 Leu Ser Ile Gln Ala Gln Ile Leu Asn Met Leu Ala Glu Leu Gln Lys
3452          510          515          520
3454 Lys Leu Ser Leu Thr Tyr Leu Phe Ile Ser His Asp Leu Ala Val Val
3455          525          530          535
3457 Arg Ser Phe Cys Thr Glu Val Phe Ile Met Tyr Lys Gly Gln Ile Val
3458 540          545          550          555
3460 Glu Lys Gly Asn Thr Lys Arg Ile Phe Ser Asp Pro Gln His Pro Tyr
3461          560          565          570
3463 Thr Arg Met Leu Leu Asn Ala Gln Leu Pro Glu Thr Pro Asp Gln Arg
E--> 3464          575          585 → change to 580
3466 Gln
4750 <210> SEQ ID NO: 45
4751 <211> LENGTH: 813
4752 <212> TYPE: PRT
4753 <213> ORGANISM: Chlamydia pneumoniae
4755 <400> SEQUENCE: 45
4756 Ser Ala Leu Gln Pro Thr Asp Ser Leu Thr Val
4757 1          5          10
4759 Glu Asn Ile Ser Gln Ser Ile Lys Phe Phe Gly Asn Leu Ala Asn Phe
4760          15          20          25
4762 Gly Ser Ala Ile Ser Ser Ser Pro Thr Ala Val Val Lys Phe Ile Asn
4763          30          35          40
4765 Asn Thr Ala Thr Met Ser Phe Ser His Asn Phe Thr Ser Ser Gly Gly
4766          45          50          55
4768 Gly Val Ile Tyr Gly Gly Ser Ser Leu Leu Phe Glu Asn Asn Ser Gly
4769 60          65          70          75
4771 Cys Ile Ile Phe Thr Ala Asn Ser Cys Val Asn Ser Leu Lys Gly Val
4772          80          85          90
4774 Thr Pro Ser Ser Gly Thr Tyr Ala Leu Gly Ser Gly Gly Ala Ile Cys
4775          95          100          105
4777 Ile Pro Thr Gly Thr Phe Glu Leu Lys Asn Asn Gln Gly Lys Cys Thr
4778          110          115          120
4780 Phe Ser Tyr Asn Gly Thr Pro Asn Asp Ala Gly Ala Ile Tyr Ala Glu
4781          125          130          135
4783 Thr Cys Asn Ile Val Gly Asn Gln Gly Ala Leu Leu Leu Asp Ser Asn
4784 140          145          150          155
4786 Thr Ala Ala Arg Asn Gly Gly Ala Ile Cys Ala Lys Val Leu Asn Ile
4787          160          165          170
4789 Gln Gly Arg Gly Pro Ile Glu Phe Ser Arg Asn Arg Ala Glu Lys Gly

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4790          175          180          185
4792 Gly Ala Ile Phe Ile Gly Pro Ser Val Gly Asp Pro Ala Lys Gln Thr
4793          190          195          200
4795 Ser Thr Leu Thr Ile Leu Ala Ser Glu Gly Asp Ile Ala Phe Gln Gly
4796          205          210          215
4798 Asn Met Leu Asn Thr Lys Pro Gly Ile Arg Asn Ala Ile Thr Val Glu
4799 220          225          230          235
4801 Ala Gly Gly Glu Ile Val Ser Leu Ser Ala Gln Gly Gly Ser Arg Leu
4802          240          245          250
4804 Val Phe Tyr Asp Pro Ile Thr His Ser Leu Pro Thr Thr Ser Pro Ser
4805          255          260          265
4807 Asn Lys Asp Ile Thr Ile Asn Ala Asn Gly Ala Ser Gly Ser Val Val
4808          270          275          280
4810 Phe Thr Ser Lys Gly Leu Ser Ser Thr Glu Leu Leu Leu Pro Ala Asn
4811          285          290          295
4813 Thr Thr Thr Ile Leu Leu Gly Thr Val Lys Ile Ala Ser Gly Glu Leu
4814 300          305          310          315
4816 Lys Ile Thr Asp Asn Ala Val Val Asn Val Ala Gly Phe Ala Thr Gln
4817          320          325          330
4819 Gly Ser Gly Gln Leu Thr Leu Gly Ser Gly Gly Thr Leu Gly Leu Ala
4820          335          340          345
4822 Thr Pro Thr Gly Ala Pro Ala Ala Val Asp Phe Thr Ile Gly Lys Leu
4823          350          355          360
4825 Ala Phe Asp Pro Phe Ser Phe Leu Lys Arg Asp Phe Val Ser Ala Ser
4826          365          370          375
4828 Val Asn Ala Gly Thr Lys Asn Val Thr Leu Thr Gly Ala Leu Val Leu
4829 380          385          390          395
4831 Asp Glu His Asp Val Thr Asp Leu Tyr Asp Met Val Ser Leu Gln Ser
4832          400          405          410
4834 Pro Val Ala Ile Pro Ile Ala Val Phe Lys Gly Ala Thr Val Thr Lys
E--> 4835          445 - change to 415 420          425
4837 Thr Gly Phe Pro Asp Gly Glu Ile Ala Thr Pro Ser His Tyr Gly Tyr
4838          430          435          440
4840 Gln Gly Lys Trp Ser Tyr Thr Trp Ser Arg Pro Leu Leu Ile Pro Ala
4841          445          450          455
4843 Pro Asp Gly Gly Phe Pro Gly Gly Pro Ser Pro Ser Ala Asn Thr Leu
4844 460          465          470          475
4846 Tyr Ala Val Trp Asn Ser Asp Thr Leu Val Arg Ser Thr Tyr Ile Leu
4847          480          485          490
4849 Asp Pro Glu Arg Tyr Gly Glu Ile Val Ser Asn Ser Leu Trp Ile Ser
4850          495          500          505
4852 Phe Leu Gly Asn Gln Ala Phe Ser Asp Ile Leu Gln Asp Val Leu Leu
4853          510          515          520
4855 Ile Asp His Pro Gly Leu Ser Ile Thr Ala Lys Ala Leu Gly Ala Tyr
4856          525          530          535
4858 Val Glu His Thr Pro Arg Gln Gly His Glu Gly Phe Ser Gly Arg Tyr
4859 540          545          550          555
4861 Gly Gly Tyr Gln Ala Ala Leu Ser Met Asn Tyr Thr Asp His Thr Thr
4862          560          565          570

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```

4864 Leu Gly Leu Ser Phe Gly Gln Leu Tyr Gly Lys Thr Asn Ala Asn Pro
4865          575          580          585
4867 Tyr Asp Ser Arg Cys Ser Glu Gln Met Tyr Leu Leu Ser Phe Phe Gly
4868          590          595          600
4870 Gln Phe Pro Ile Val Thr Gln Lys Ser Glu Ala Leu Ile Ser Trp Lys
4871          605          610          615
4873 Ala Ala Tyr Gly Tyr Ser Lys Asn His Leu Asn Thr Thr Tyr Leu Arg
4874 620          625          630          635
4876 Pro Asp Lys Ala Pro Lys Ser Gln Gly Gln Trp His Asn Asn Ser Tyr
4877          640          645          650
4879 Tyr Val Leu Ile Ser Ala Glu His Pro Phe Leu Asn Trp Cys Leu Leu
4880          655          660          665
4882 Thr Arg Pro Leu Ala Gln Ala Trp Asp Leu Ser Gly Phe Ile Ser Ala
4883          670          675          680
4885 Glu Phe Leu Gly Gly Trp Gln Ser Lys Phe Thr Glu Thr Gly Asp Leu
4886          685          690          695
4888 Gln Arg Ser Phe Ser Arg Gly Lys Gly Tyr Asn Val Ser Leu Pro Ile
4889 700          705          710          715
4891 Gly Cys Ser Ser Gln Trp Phe Thr Pro Phe Lys Lys Ala Pro Ser Thr
4892          720          725          730
4894 Leu Thr Ile Lys Leu Ala Tyr Lys Pro Asp Ile Tyr Arg Val Asn Pro
4895          735          740          745
4897 His Asn Ile Val Thr Val Val Ser Asn Gln Glu Ser Thr Ser Ile Ser
4898          750          755          760
4900 Gly Ala Asn Leu Arg Arg His Gly Leu Phe Val Gln Ile His Asp Val
4901          765          770          775
4903 Val Asp Leu Thr Glu Asp Thr Gln Ala Phe Leu Asn Tyr Thr Phe Asp
4904 780          785          790          795
4906 Gly Lys Asn Gly Phe Thr Asn His Arg Val Ser Thr Gly Leu Lys Ser
4907          800          805          810
4909 Thr Phe

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## VERIFICATION SUMMARY

DATE: 10/29/2001

PATENT APPLICATION: US/09/830,446

TIME: 11:24:02

Input Set : A:\seged.app.txt

Output Set: N:\CRF3\10292001\I830446.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:3464 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:36

L:4835 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:45